

Optical blood culture sensor

Patent Number: EP0697460

Publication date: 1996-02-21

Inventor(s): BERNDT KLAUS W (US)

Applicant(s): BECTON DICKINSON CO (US)

Requested Patent: EP0697460, A3, B1

Application Number: EP19950305527 19950808

Priority Number (s): US19940290405 19940815

IPC Classification: C12M1/34; G01N21/64

EC Classification: C12M1/34H5, G01N21/64F

Equivalents: AU2497195, AU686808, CA2154136, DE69523688D, DE69523688T, JP2696081B2,
 JP8062138, US6074870

Cited Documents: EP0567232; US5196709; US4822733; US5281825

Abstract

A culture medium and blood specimen are introduced into a sealable glass vial having a head space gas mixture such that a change in the gas mixture composition can be monitored by a chemically sensitive material in the vial comprising a mixture of two fluorescent sensor materials. The first sensor material exhibits a long fluorescence decay time and/or a fluorescence intensity that depend on a first chemical parameter, such as oxygen concentration. The second sensor material exhibits a fluorescence intensity that depends on a second chemical parameter, such as pH or carbon dioxide concentration, the fluorescence decay time of the second sensor material being extremely short.

Data supplied from the **esp@cenet** database - I2

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 697 460 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.02.1996 Bulletin 1996/08

(51) Int Cl. 6: C12M 1/34, G01N 21/64

(21) Application number: 95305527.4

(22) Date of filing: 08.08.1995

(84) Designated Contracting States:
CH DE FR GB IT LI NL

(72) Inventor: Berndt, Klaus W.
Stewartstown PA 17363 (US)

(30) Priority: 15.08.1994 US 290405

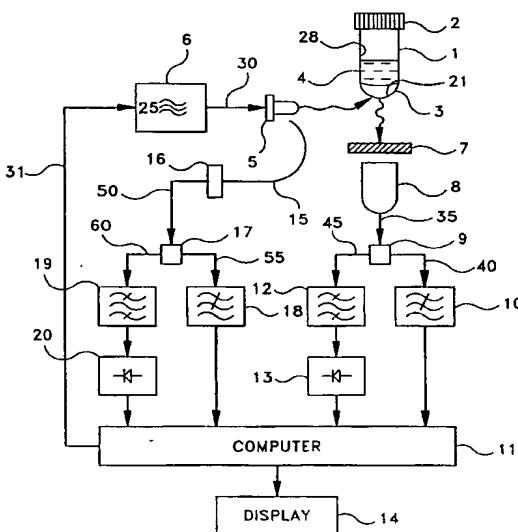
(74) Representative: Ruffles, Graham Keith
London WC2A 3LS (GB)

(71) Applicant: Becton Dickinson and Company
Franklin Lakes, New Jersey 07417-1880 (US)

(54) Optical blood culture sensor

(57) A culture medium and blood specimen are introduced into a sealable glass vial having a head space gas mixture such that a change in the gas mixture composition can be monitored by a chemically sensitive material in the vial comprising a mixture of two fluorescent sensor materials. The first sensor material exhibits a long fluorescence decay time and/or a fluorescence intensity that depend on a first chemical parameter, such as oxygen concentration. The second sensor material exhibits a fluorescence intensity that depends on a second chemical parameter, such as pH or carbon dioxide concentration, the fluorescence decay time of the second sensor material being extremely short.

FIG - 1



EP 0 697 460 A2